Ukrainian Journal of Ecology

Investigating the internal and external factors of Imam Street in Sirjan to create urban space, emphasizing on the elderly's need

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Aging is one of sensitive and critical steps of human's growth. Investigating the limitations and needs arising from aging will significantly affect providing an appropriate environment from them. The aim of this paper is to investigate internal and external factors to create appropriate urban space, emphasizing the elderly's need. This study is applied one in terms of goal and descriptive of the case study type (Imam Street in Sirjan, Kerman) in terms of methodology. To collect data, library method through note taking and field study through the tools of recording images were used. The variables of the study include urban space, the elderly and the needs of elderly in urban space. The criteria and features are obtained from valid library references and used in optimal designing form. Investigating the matrix of investigating internal factors (identifying the strengths and weaknesses) and the matrix of evaluating external factors (identifying opportunities and threats of the area) indicated that total score of internal factors to create urban space, emphasizing on the elderly's need in Sirjan was 5.47, indicating the strength of internal factors. The score of external factors was obtained as 4.98, showing that the area hasn't been able to exploit the factors, creating opportunity or avoid the threatening ones.

Key words: appropriate place; optimal design; initial perspective; the matrix of evaluating external factors; the matrix of evaluating internal factors

Introduction

One of the major problems of the elderly in case of having independency and participating in social interactions, considered as social needs of elderlies, is lack of urban spaces and environments. Cognitive problems of elderlies in the environment are discussed in the form of three general issues: familiarizing with environment, concentration in the environment (readability) and routing (Zandiyeh, 2012; Booth et. al., 2000)

The city and its neighborhoods have two physical and social aspects, intervening and changing each one of them, the other one will be improved. Sometimes the change in another aspect seems necessary; as an example, in terms of social aspect, vulnerable groups such as elderlies need some special facilities but the same group has been forgotten in most of today cities though these groups are discussed a lot in social issues (Mirchooli, 2012; Borst, Miedema, 2005; Fisher et. al., 2002)

Whoever gets old and all people in any ages take advantage of their local street design, appropriate for the elderly's need, (usability, perceivably and being joyful) and being able to find their route. The studies show that six key principles have to be applied that is the streets need to be familiar, readable, recognizable, available and secure (Zabetian, 2011, Giles-Corti et. al., 2005; Moudon et. al., 2007).

Since population aging is a new phenomenon, happened in early 21st century in developing countries and will happen for developed ones in twenty or forty future years, most of conducted studies are related to the recent years (Alalhesabi, Rafiei, 2012).

Most of attentions to the elderly have been allocated to medicine, health and physical, mental health and emphasize on health cares, prevention and treatment. In the case of urbanization, there are a few articles about elderlies, all of them related to the recent decade. The paper of elderlies in city, written by Dr. Etemad, can be mentioned as one of them which discusses the needs of elderlies in commuting, shedding light on commuting and public transportation in our current society (Greenwald, Boarnet, 2000; Li et. al., 2005). The elderly's leisure needs have been also investigated. In Qazvin, recreational and activities, interested by elderlies, have been noticed through distributing some questionnaires among the elderlies of public parks such as tourism, social participation, cultural, artistic, Quranic and religious activities (Zarei, 2007, Borst et. al., 2008, 2009; Michael, 2006).

In foreign experimental literature of the subject in the current paper, the most discussion can be found about the elderlies and the features of an appropriate route or public transportation for them. In his study, given the physical properties of various

routes, Barest (2009) considers several cases such as sidewalk, stair of slope, state walls, the trash in route or the areas around it, lined intersections, the shops, bus stops, empty lands, parks and the green lines, separating sidewalk from street, effective on choosing a route by the elderly to walk for a special purpose (Jackson, 2003; Wijlhuizen et. al., 2007).

Sujibama (2009) concluded similarly through investigating the elderly's walking in winter and summer. He argues six features of neighboring open spaces: vitality and amenity, good sidewalks, security, good facilities, obstacles and harassment, fountain (Mowen, 2007)

Generally, healthy environment for the elderly can be stated through five items: a healthy environment is clean and free of contamination (traffic, trash ...). A healthy environment provides physical exercises and sports. A healthy environment requires social interaction and supports (Pikora et. al., 2006). A healthy environment is both calm and silent. A healthy environment grows the emotions and feelings (Saelens et. al., 2003; Srinivasan, 2002; World Health Organization, 2008).

The aim of this study is precise identification of features and needs of elderlies and their problems in urban space and also achieving the rules and criteria of designing urban spaces, appropriate for the elderly's needs in Imam Street of Sirjan (Strach et al., 2007; Sugiyama, Thompon Ward, 2008; World Health Organization, 2007).

Methodology

This study is applied one in terms of goal and descriptive of the case study type (Imam Street in Sirjan, Kerman) in terms of methodology. To collect data, library method through note taking and field study through the tools of recording images are used. The variables of the study include urban space, elderly and the needs of elderly in urban space. The criteria and features are obtained from valid library references and used in optimal designing form. The approach is SWOT analysis, abbreviated as Strengths, Weaknesses, Opportunities and Threats. The first step in strategic planning is determining the mission and goals and then a strategy can be designed through SWOT analysis, being appropriate for the area. Using this analysis, firstly analyzing internal and external environments will be possible and secondly strategic decisions can be made, balancing the strengths of organization with environmental opportunities.

Strength: it means excellent merit, using which the environment can be superior.

Weakness: it is a kind of limitation or lack of resources, skills, facilities and abilities, tangibly prevents effective performance of environment. Management performance is also effective in exacerbating the weaknesses.

Opportunity: it means a major ideal success in external environment

Threat: it is an undesired success in external environment, can be threatening the success majorly.

Results
Analyzing the information
The matrix of evaluating internal factors: the aim of this step is to evaluate internal environment of the area to identify strengths and weaknesses of that that is the aspects, having better conditions for achieving the planning goals and implementing its tasks, are considered.

Table 1. The matrix of analyzing internal factors (strengths and weaknesses)

Strengths	No	Internal factors	Importance coefficient (1)	Rank (1-4)	Score
	-1	The existence of empty lands in the study area	0.06	4	0.24
	-2	The existence of public transportation network	0.07	2	0.14
	-3	The existence of market and mosque for traditional activities	0.04	4	0.16
	-4	The possibility of attracting different uses	0.06	3	0.18
	-5	The existence of green space and park	0.06	4	0.24
	-6	employment and earning	0.07	4	0.28
	-7	Modifying the life quality of native people of area	0.05	3	0.15
	-8	The existence of openness and open space	0.07	3	0.21
	-9	The existence of Imam street with important commercial use around the city	0.05	4	0.20
	-10	The existence of traditional market	0.04	3	0.12
	-11	Seeing outside of the street	0.05	2	0.10
	-12	The existence of particular routes in special occasions	0.06	2	0.12
	-13	The existence of single-direction street	0.06	3	0.18
	Total				2.32

Weaknesses	No	Internal factors	Importance coefficient (1)	Rank (1-4)	Score
	-1	The existence of uniform uses or lands	0.05	3	0.15
	-2	Lack of recreational uses	0.04	3	0.12
	-3	Cutting sidewalk in the intersection of ally and Imam Street	0.06	3	0.18
	-4	Lack of adequate space for activities in public areas	0.04	2	0.08
	-5	Undesired status of passages floors	0.07	2	0.14
	-6	The existing walls and monuments erosion	0.06	3	0.18
	-7	Lack of unity and simplicity in facades and walls	0.05	3	0.15
	-8	The existence of dazzling visions due to the light of the West	0.06	3	0.18
	-9	Lack of bike lane	0.05	3	0.15
	-10	Lack of clean and usable rubbish bin	0.06	2	0.12
	-11	The existence of street with commercial use	0.04	3	0.12
	-12	The existence of left water	0.05	2	0.10
	-13	Interference of public and private spaces with the influence of commercial units on a city scale to neighborhoods	0.06	3	0.18
	-14	Lack of appropriate urban furniture and shades	0.07	2	0.14
	-15	The existence of destroyed skyline by constructional facades	0.05	3	0.15
	-16	The existence of a crowd in front of the market	0.06	2	0.12
	-17	Lack of proper definition for entrance	0.06	3	0.18
	-18	The existence of irregular sights in walls	0.06	2	0.12
	-19	Using non-native materials in facades and walls	0.05	3	0.15
	-20	Lack of rhythm on the skyline	0.04	4	0.16
	-21	The existence of many cars	0.05	2	0.10
	-22	The existence of ruins	0.6	2	0.18
	Total				3.15
		The total of strengths and weaknesses			5.47

The matrix of evaluating external factors: the aim of this step is to evaluate external environment of study area to identify opportunities and threats of the area which means the aspects, having better conditions for achieving the planning goals and implementing its tasks, are considered.

Table 2. The matrix of analyzing external factors (opportunity and threat)

Opportunities	No	Internal factors	Importance coefficient (1)	Rank (1-4)	Score
	-1	The possibility of attracting proper idea and plan	0.07	4	0.28
	-2	The possibility of attracting the elderly	0.06	3	0.18
	-3	Creating a space for social interaction	0.06	3	0.18
	-4	Attracting the investors	0.05	4	0.20
	-5	Promoting the route readability for the elderly	0.07	2	0.14
	-6	Welcoming the elderly	0.05	2	0.10
	-7	The possibility of attracting appropriate and different uses	0.04	3	0.12
	-8	Reaching the urban potential, taking advantage of space position especially at night	0.06	3	0.18

	No	Internal factors	Importance coefficient (1)	Rank (1-4)	Score
	-9	The possibility of creating resting spaces, emphasizing on attraction of proper ideas	0.06	4	0.24
	-10	Attracting organizing plans	0.06	3	0.18
	-11	The possibility of attracting proper plans	0.05	3	0.15
	-12	Attracting the proper ideas and plans for economic boom	0.07	4	0.28
	Total				2.23
Threats	**No**	**Internal factors**	**Importance coefficient (1)**	**Rank (1-4)**	**Score**
	-1	The possibility of attracting inappropriate uses	0.06	2	0.12
	-2	Lack of vitality	0.05	3	0.15
	-3	Lack of welcoming the elderly	0.07	3	0.21
	-4	Lack of security for old pedestrians	0.06	3	0.18
	-5	Lack of proper urban furniture	0.06	2	0.12
	-6	Lack of feeling comfort in the elderly	0.04	3	0.12
	-7	The possibility of creating Chaos in elderlies	0.07	2	0.14
	-8	the possibility of accident	0.06	3	0.18
	-9	Reducing the economic boom in other areas of the city	0.06	4	0.24
	-10	Lack of attracting the users and creation of crowd	0.05	4	0.20
	-11	The possibility of increasing environmental pollution	0.07	2	0.14
	-12	Lack of environment perception for the elderly	0.06	3	0.18
	-13	Lack of confidence in elderlies	0.05	3	0.15
	-14	The possibility of meaningless sense in the elderlies	0.06	2	0.12
	-15	Creating chaos sense	0.07	2	0.14
	-16	Attracting criminal people	0.06	3	0.18
	Total				2.75
	The total of opportunities and threats				4.98

The sum pf final score of internal factors to create urban space, emphasizing on the needs of elderlies in Sirjan is 5.47, indicating the strength of internal factors. The score of external factors was obtained as 4.98, showing that the area hasn't been able to exploit the factors, creating opportunity or somehow avoid the threatening ones.

Conclusion

Based on the obtained results here, the related solutions and strategies to the general 12 criteria and policies of access, social interaction, security, physical activity, sense stimulation, comfort and convenience, direction, familiarity, perceptual ability, confidentiality, meaning and the sense of independency are proposed as follows. The mentioned criteria, in the form of micro goals of three components, are proposed as follows:
Functional components: land use system, movement and access system, installation and equipment system, the system of activity and public spaces. Aesthetic components: physical form system, urban space system. Environmental components: Natural base system.
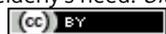
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